Ivan Monge

Mechatronic Engineer

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Willing to Relocate

Dynamic, solution-oriented, and hands-on technical utility player, centered in electrical, mechanical, and software systems. Focused on creating collaborative efforts between support, engineering, and quality teams to implement systems or product changes and solve quality issues. Hands-on experience resolving electrical, mechanical, and software issues thru the use of different tools and software such as multimeters, pressure calibrators, RSLogix, and RSNetworx. 5+ years of demonstrated experience in electrical, mechanical, and software providing support to prototyping production tests, giving solutions, and providing information about system performance and functionality. Involved and focused on software test life cycle, bench testing, and in-vehicle testing.

Soft Skills

- Creative Problem Solving
- Collaboration & TeamWork
- Multitasking
- Critical Thinking
- Self-Motivation
- Work ethic
- Fast Learner
- Persistence

Technical Skills

- Factory Talk - *Good*
- Python Script - *Good*
- RSLogix5/500/5000 - *Excellent*
- Visual Basic Automation Macros for Microsoft Office – *Excellent*
- C++ - *Basic*
- VFD Programming - *Good*
- Computer Vision – *Good*
- Visual Studio Code - *Good*

Experience

10/2021 – CURRENT

Automation Control Engineer / Gowan Milling, Yuma AZ.

- Exploring and implementing new ways to automate systems such as computer vision.
- Research for packaging automation machines.
- Designing and testing automation equipment and processes.
- Programming new automated components.
- Develop and implement improvements to existing automation in mechanical assembly, machining, and packing processes.
- Develop and implement maintenance programs for equipment.
- Manage equipment purchase and installation.

03/2021 – 10/2021

Sr. Electrical/Software Design Engineer / Kenworth, Mexicali B.C.

- Software analysis, code analysis, requirements analysis, software review.
- Software testing and system quality assurance.
- Integrate software with existing systems.
- Evaluate and identify new technologies for implementation.
- Worked with product planners and industrial designers to conceptualize and refine product concepts.
- Work with new product engineers and liaison engineers for the implementation of new software/ADAS systems.
- Determine operational feasibility by evaluating analysis, problem definition, requirements, solution development, and proposed solutions.
- Develop software verification plans and quality assurance procedures.
- Review electrical and software technical issues on pilots.
- Perform and analyze CAN trace logs on different Truck CANs using Vector CANoe to test and find ADAS and new software systems issues.
- Create test for software validations following specification documents such as EEAF, Software Requirements, and FDS.
- Perform electrical harness and software validations at bench test station and physically in the trucks.

01/2019 – 02/2021

Sr. PACCAR Engine Liaison / Kenworth, Mexicali B.C.

- Provide assistance to production by researching and resolving local PACCAR Engine issues, participating in quality events creating action plans to tackle obstacles.
- Communicate with Production members to assess concerns or current issues and identify corrective measures.
- Offer constructive feedback and contributed ideas at weekly staff meetings with PACCAR Engine Company.
- Conduct engine tests and analyses using special equipment and tools for the PACCAR Engine.
- Read and interpret blueprints, technical drawings, schematics (mechanical and electrical), and computer-generated reports.
- Verify construction documentation conformed to quality assurance standards and client requirements.
- Develop and implement process flow improvement and standardization projects.
- Use CREO Pro E to draft assemblies, models, and other technical drawings.
- Provide technical direction on Engineering projects and initiatives to other engineers, designers, and technicians.
- Use precision test equipment such as multimeters, Vector, and oscilloscopes.
- Apply mathematical skills and understanding of engineering principles to identify PACCAR Engine issues.
- Perform analysis of Embedded Systems technical designs and prototypes in the development stage.
- Recommend design modifications to eliminate hardware and software system malfunctions.
- Ensure design compliance with product specifications and standards requirements.
- Provide technical guidance, peer review, and mentorship to junior engineers engaged in building system designs.

09/2017 – 02/2019

Electrical/Software Liaison Engineer / Kenworth, Mexicali B.C.

- Completed design projects by effectively applying engineering, technical, and maintenance procedures.
- Compiled data and generated graphs to interpret results and suggest key operational improvements.
- Work with new product engineers and software design engineers to implement new software/ADAS systems.
- Implemented schematics, diagrams, and written and verbal descriptions to effectively solve engineering project issues.
- Used Creo Pro E to draft assemblies, models, and other technical drawings.
- Conducted engineering and detailed experimental tests to collect design data and assist in research work.
- Collaborated with engineers in new product introduction phases to develop and verify electrical design changes.
- Read and interpreted blueprints, technical drawings, schematics, and computer-generated reports.
- Used precision test equipment such as multimeters, VECTOR, and oscilloscopes.
- Followed up on manufacturing, and field reports, and resolved electrical and software outstanding problems.
- Applied engineering principles to develop and operate electrical, mechanical, and data processing systems.
- Created Bills of Materials and certifications.

04/2016 – 09/2017

Electrical Design Engineer / Kenworth, Kirkland WA.

- Write and performed complex Electrical component tests.
- Conducted research to test and analyze feasibility, design, operation, and performance of electrical equipment, components, and systems.
- Tested Electrical products extensively to measure against the design intent.
- Created CAD models and drawings for Electrical Harness designs.
- Worked with product planners and industrial designers to conceptualize and refine product concepts.
- Oversaw product development, design, and releases for production of Electrical Harness.
- Developed and tested models of alternate designs and processing methods to assess feasibility, operating condition effects, possible new applications, and necessity of modification.
- Planned and evaluated results of DFMEA analysis, modeling, and experiments.
- Design harness following DFSS doing Design Failure Mode and Effect Analysis and Design Verification Plan and Report (test).
- Follow meetings with suppliers for design improvements.

Accomplishments

- Design and develop a full computer vision system (python) to detect the presence of lot numbers, labels, and correct bottle quantity in a case pack.

- Design Excel Macro to help reduce programming diagnosis issues from 1 hour to 15 minutes.
- Reduced the delivery time of trucks needing hotfix from 7 hours to 15 minutes by an API Macro project.
- Documented 14 projects from 2016 to 2020, which lead to $127,800 in savings.
- Project to communicate 32 bits processor with 16 bits processor to be able to use stock equipment.
- Implemented digital display to remove old analog displays for a more reliable and accurate weight and temperature display.

Education

08/2011 – 02/2016

Bachelor's Degree Mechatronic Engineering / CETYS, Mexicali B.C.

09/2019 – 12/2020

Master Software Management and Engineering / Universidad Tecnológica Latinoamericana

Certifications

- Factory Talk design - Rockwell Automation
- VFD maintenance and programming - Rockwell Automation
- Design for Six Sigma - PACCAR Inc.
- Lean Manufacturing - PACCAR Inc.
- MX Engines (PACCAR Engines) Technical Certificate - PACCAR Inc.
- Aftertreatment/CAN Diagnosis Technical Certificate - PACCAR Inc.